

# **RABIES IMMUNIZING PRODUCTS**

There are two types of immunizing products for use in humans: 1) vaccines that induce an active immune response, which requires about 7-10 days to develop but may persist for as long as a year or more, and 2) immune globulins that provide rapid passive immune protection for a short period of time (half-life of about 21 days). Both types of products should be used concurrently for rabies postexposure prophylaxis in those persons who have never received prior immunization against rabies.

## **Vaccines for Use in Texas**

This section contains some pertinent information on the rabies biologicals available in Texas. It is recommended that the package insert be consulted before the use of any of these products.

### **HDCV**

Human diploid-cell rabies vaccine (HDCV): HDCV is an inactivated virus vaccine prepared from rabies virus grown in human diploid cell culture and then inactivated. Vaccine is supplied as 1 ml, single-dose vials of freeze-dried vaccine with accompanying diluent for intramuscular (IM) injection (IMOVAC® Rabies Vaccine) and 0.1 ml single-dose syringes of freeze-dried vaccine with accompanying diluent for preexposure intradermal (ID) use (IMOVAC® Rabies ID). Both formulations must be used immediately after reconstitution.

Serious adverse reactions associated with rabies vaccines include systemic, anaphylactic, and neuromuscular reactions. Serious adverse reactions occur at lower rates with the HDCV vaccine than with previously available types of rabies vaccine.

### **RVA**

Rabies vaccine adsorbed (RVA): RVA is another cell culture-derived rabies vaccine. RVA is licensed for both preexposure immunization and PEP. It is prepared from rabies virus grown on a diploid cell line of fetal rhesus lung. The virus is inactivated and concentrated but not freeze-dried; thus, it is distributed as a liquid. The preexposure and postexposure intramuscular dosage volumes and schedules are the same for HDCV and RVA, but an intradermal formulation of RVA is not available. (As of January 1999, RVA is not available from the manufacturer. It is not clear when or if it will be available again.)

## **PCEC**

Purified chick embryo cell culture vaccine (PCEC) is a sterile freeze-dried vaccine obtained by growing the fixed-virus strain Flury low egg passage in primary cultures of chicken fibroblasts. PCEC (RabAvert®) is licensed in the United States for intramuscular use in both preexposure immunization and PEP. The schedules and dosage for PCEC is the same as HDCV and RVA. It may be used as a booster dose even if another rabies vaccine was used for the primary series.

## **Immune Globulin**

Human rabies immune globulin (HRIG): HRIG (BayRab®, Imogam® Rabies, Imogam® Rabies - HT) is antirabies gamma globulin concentrated by cold ethanol fractionation from the plasma of immunized human donors. Rabies neutralizing antibody content is standardized to contain 150 international units (IU) per ml. It is supplied in 2 ml (300 IU) and 10 ml (1,500 IU) vials for pediatric and adult use, respectively. Imogam® Rabies - HT has received an additional heat treatment (HT) step to further reduce any risk of the transmission of known or unknown blood-borne viruses.

## **RATIONALE OF TREATMENT**

Physicians must evaluate each possible rabies exposure. Local or state public health officials should be consulted if questions arise about the need for prophylaxis. Found in the middle of this manual is a **Postexposure Prophylaxis Decision Tree** that can be used as a convenient guide in determining the need for PEP.

## **MANAGEMENT OF BITING ANIMALS**

A healthy pet dog or cat that bites a person should be confined and observed for 10 days and evaluated by a veterinarian at the first sign of illness during confinement. Any illness in the animal should be reported immediately to the local health department. If signs suggestive of rabies develop, the animal should be humanely killed in a manner that preserves the head in an undamaged state, and its head removed and shipped, at 32 to 45 degrees Fahrenheit, for examination by a qualified laboratory designated by the Texas Department of Health. Any stray or unwanted dog or cat that bites a person should be killed immediately and the head submitted for rabies examination.